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10/617,215

07/07/2003

Francesco Grilli

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QUALCOMM INCORPORATED
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EXAMINER

SON, LINH L D

ART UNIT

PAPER NUMBER

2135

| SHORTENED STATUTORY PERIOD OF RESPONSE | NOTIFICATION DATE | DELIVERY MODE |
|--|-------------------|---------------|
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3 MONTHS

01/30/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary

Application No.

10/617,215

Applicant(s)

GRILLI ET AL.

Examiner

Linh LD Son

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is responding to the filing of the application received on 07/07/03.
2. Claims 1-61 are pending.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-6, 12-16, 22-27, 31-35, 41-46, 52-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Berenzweig et al, European Patent No 1001570A2, hereinafter "Berenzweig" (Cited in PTO 1449 05/23/2005).
5. As per claims 1, 12-13, 22, 31-32, 41, and 52-53:

Berenzweig discloses "A method of obtaining secure registration by a memory module (UICC) in a multicast-broadcast-multimedia system (MBMS), the method comprising:

receiving a random number (R_T) in a memory" in (Col 5 lines 30-35);

generating a radio access network key (RAK) $\{K_A = F^A(R_T, K_i)\}$ as a function of the random number and a key selected from the group consisting of a public land mobile network key (PK) $\{K_i\}$ and a broadcast access key (BAK)" in (Col 5 lines 30-57) {Visiting authentication center contacts the Home authentication center to get the radio access network key by calculating as a function of K_i , and R_T }; and

generating a temporary registration key (RGK) $\{K_C\}$ as a function of the RAK" in (Col 5 lines 43-46).

6. As per claims 2, 23, 42:

Berenzweig discloses "The method of claims 1, 22, 41, further comprising transmitting the RGK to a mobile telephone" in (Col 6 lines 25-30).

7. As per claims 3, 14, 24, 33, 43:

Berenzweig discloses "The method of claims 1, 13, 32, 41, further comprising receiving a provisioning message from a broadcast-multicast service center" in (Col 6 lines 25-30).

8. As per claims 4, 15, 25, 34, 44, 55:

Berenzweig discloses "The method of claims 3, 14, 33, 43, 54 wherein the provisioning message is a function of the PK and a permanent registration key (RK)" in (Col 6 lines 25-30) $\{PK = K_A = F^A(R_T, K_i), \text{ and } K_C\}$.

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9. As per claims 5, 25-26, 45, 54:

Berenzweig discloses "The method of claims 3, 24, 32, 43, 53 further comprising extracting the PK from the provisioning message" in (Col 5 line 55 to Col 6 line 5).

10. As per claims 6, 16, 27, 35, 46, and 56 :

Berenzweig discloses "The method of claims 1, 13, 22, 32, 41, and 53 wherein the RGK is a function of the RAK, a service identification number and a user identification number" in (Col 2 lines 42-50).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claim s 7, 17, 28, 36, 47, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berenzweig in view of Lahteenmaki, US Patent No. 7114175.

13. As per claims 7, 17, 28, 36, 47, and 57:

Berenzweig does not discloses "The method of claims 6, 16, 27, 35, wherein the RGK is a function of the RAK and a cyclic redundancy code (CRC) computed from the service identification number and the user identification number.

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Nevertheless, Lahteenmaki does disclose a method of utilizing a certificate that has information about the user id and service id in Col 11 line 60 to Col 12 line 5.

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to modify Berenzweig's teaching to incorporate Lahteenmaki's teaching of utilizing the certificate for authentication in the process of the network provisioning to prevent unauthorized access.

14. Claims 8-9, 18-19, 37-38, 48-49, and 58-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berenzweig in view of Shi, US Pub No. 20040022216A1, in view of Shi, US Publication No. 20040022216A1.

15. As per claims 8, 18, 37, 48, and 58:

Berenzweig does not disclose "The method of claims 1, 12, 31, 41, 52 wherein the UICC comprises a subscriber identity module (SIM) in a Global System for Mobile communication (GSM) system". Berenzweig only teaches of Mobile device in a GSM environment.

Nevertheless, Shi does disclose of SIM chip in a GSM environment in Para 007.

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to realize that SIM is utilizing in a GSM environment.

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16. As per claims 9, 19, 38, 49, and 59 :

Berenzweig does not disclose "The method of claims 1, 12, 31, 41, 52 wherein the UICC comprises a removable user identity module (RUIM) in a code division multiple access (CDMA) system". Berenzweig only teaches of Mobile device in a CDMA environment.

Nevertheless, Shi does disclose of the RUIM in a CDMA environment in Para 007.

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to realize that RUIM is utilizing in a CDMA environment.

17. Claims 10-11, 20-21, 29-30, 39-40, 50-51, 60-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berenzweig in view of Diffie et al, US Patent No. 5371794, hereinafter "Diffie".

18. As per claims 10, 20, 29, 39, 50, and 60:

Berenzweig does not disclose "The method of claims 1, 12, 22, 31, 41, and 52 wherein the PK is provisioned by using a public key". Nevertheless, Diffie does disclose a method of provisioning network Key by using a public key (Col 8 lines 15-18).

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to modify the Berenzweig's teaching to incorporate

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the transmission of PK in a secure communication utilizing a public key as taught in Diffie.

19. As per claims 11, 21, 30, 40, 51, and 61:

Berenzweig does not disclose "The method of claims 1, 12, 22, 31, 41, and 52 wherein the BAK is provisioned by using a public key. Nevertheless, Diffie does disclose a method of provisioning network Key by using a public key (Col 8 lines 15-18).

Therefore, it would have been obvious at the time of the invention was made for one having ordinary skill in the art to modify the Berenzweig's teaching to incorporate the transmission of BAK in a secure communication utilizing a public key as taught in Diffie.


20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh LD Son whose telephone number is 571-272-3856. The examiner can normally be reached on 9-6 (M-F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Linh LD Son
Examiner
Art Unit 2135



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